visiting chief social scientist. That includes putting forms on a Web site, standardizing rules for all parks, and scrapping a policy that encourages park managers to turn down a study if it can be done elsewhere.

Scientists within and outside Interior welcome these reforms. "It's a good step in the right direction, more than I could have asked for," says Sellars. But good intentions aside, some former Park Service scientists, such as Nate Stephenson, a plant ecologist at Sequoia Kings Canyon, question whether this new program can forge the kinds of close ties between researchers and park managers that existed when basic scientists were still part of the Park Service. "My fear is that with turnover in personnel, some of the communications that developed when we were part of the Park Service will become weaker and weaker," Stephenson says.

Critics also question the extent of support for the science program among top Park Service leaders. "Part of the challenge is to change the culture of the Park Service," concedes Machlis. Each park is a fiefdom ruled by its superintendent, and superintendents vary in their interest in science, Sellars points out. Indeed, only one superintendent from the largest parks rose from the ranks of natural resource managers rather than park rangers. Soukup wants to address that by promoting resource managers and grading superintendents on how well they use science. After all, the best scientific advice in the world won't help if no one at the top is listening.

–JOCELYN KAISER

GENETICS

Uphill Battle to Honor Monk Who Demystified Heredity

Scientists are renewing a drive to found a "Cold Spring Harbor East" in tribute to Gregor Mendel, whose work was rediscovered 100 years ago

BRNO, CZECH REPUBLIC—In what may be the most unlikely birthplace of a science, the discipline of genetics took root in a humble garden in the courtyard of a monastery in this ancient Moravian city. Today, a weathered stone foundation is all that remains of the garden's hothouse, and only a grass yard and a lone sycamore mark the spot where Gregor Mendel, an obscure Augustinian monk, bred pea plants nearly a century and a half ago to learn how traits are handed down from one generation to the next. What Mendel learned from those pea plants revealed the fundamental laws of inheritance.

To help mark the rediscovery of Mendel's work 100 years ago, a group of researchers has drafted ambitious plans to transform part of his old monastery, which now has only a small museum, into a modern center that would host scientific meetings and perhaps a bioinformatics institute—a kind of Cold Spring Harbor East. "We want to link Mendel's heritage to the international community of scientists," says Emil Palecek, a molecular biologist at the Czech Academy's Institute of Biophysics in Brno.

If Palecek and his colleagues succeed, their center would be a triumph not only for Mendel's legacy, but also for a discipline still haunted in Eastern Europe by one of the ugliest scientific frauds of last century—Lysenkoism, which poisoned genetics behind the Iron Curtain in the early years of the Cold War. But even though they have won endorsements from high-powered individuals such as Nobel Prize winner James D. Watson and Czech President Vaclav Havel, backers of the so-called Mendel Center have so far received only a lukewarm response from the European scientific community, including potential funders. They are now broadening their appeal through symposia this year to mark the centennial of the establishment of Mendelian genetics.

History suggests they face an uphill battle. Attempts to grandly honor Mendel's scientific legacy, like the monk's own efforts to promote his laws of heredity, have been a study in frustration. Mendel was born in 1822 in what was then a province of Austrian Silesia and studied at the University of Vienna before moving to Brno, where he did all of his landmark research. He first outlined his findings in a series of lectures in 1865 and published his seminal work, "Experiments in Plant Hybridization," in Brno in 1866. The monograph, however, was all but ignored until after Mendel, dispirited by the lack of recognition, died in 1884. It would take another 16 years for Mendel to get the credit he was due, when three prominent and competing European botanists—Hugo de Vries, Karl Correns, and Erich Tschermak von Seysenegg—rediscovered Mendel's work in the course of their own research and Correns cited "Mendel's laws" of heredity in 1900. Suddenly, the forgotten monk—thanks to the citations and the ensuing efforts of British zoologist William Bateson to promote Mendel's reputation—was hailed for his pioneering contributions to genetics.

A monk and his disciples. Pavel Braveny and Eduard Schmidt are hoping Brno will host more than a statue in tribute to Mendel.

CREDIT: R. KOENIG

When Czechoslovakia was carved out of the defeated Austro-Hungarian Empire after World War I, scientists in the nascent country planned to honor Mendel by establishing a genetics research center near his monastery. The Nazi occupation and World War II dashed those plans, however. Brno scientists hid Mendel's manuscripts and notes in a local institute's safe, says Anna Matalova, director of a small Mendel museum, the Mendelianum, that now occupies several rooms of a monastery building. Shortly before the Soviet occupation in 1945, a relative of Mendel's spirited the original manuscript of "Experiments in Plant Hybridization" into Germany for safekeeping. "It's a miracle that the artifacts in the Mendel museum survived at all," says Pavel Braveny, a Brno physiology professor who is among the local Mendel Center organizers, along with Palecek and physicist Eduard Schmidt of Brno's Masaryk University.

The end of the war marked only the beginning of the troubles for Mendelian geneticists in Czechoslovakia, who soon came under the thumb of Trofim Lysenko, a Ukrainian agronomist who rose to power in the Soviet Union in the 1930s under dictator Joseph Stalin. Lysenko's dogmatic view that nature could be sculpted at will and the corollary—that the laws of genetics were a hoax—held sway for more than 25 years. Soviet scientists who publicly avowed the existence of genes often were

banished to Siberian gulags.

Lysenkoism infected the Soviet satellites as well. In Brno, city officials removed a stone Mendel monument—a statue of the monk clutching a pea plant—from the city's Mendel Square and stashed it in the monastery, which after World War II was converted into a hostel and government offices. During those dark days, prominent Czech geneticists led by Jaroslav Krizenecky—who had campaigned for a Mendel research center as early as the 1920s—spoke out on behalf of Mendel. He and others paid a high price, with some getting thrown in jail for anti-Lysenkoist views, according to Mendel biographer Vitezslav Orel, a Brno geneticist. It was not until 1964, after the Soviet authorities finally rejected Lysenkoism, that Brno scientists were able to organize a conference on Mendelian genetics. The Mendelianum opened the following year to mark the 100th anniversary of Mendel's lectures on heredity.

Now some scientists are rekindling the Mendel Center idea. "Mendel was an extremely important figure, more important than Darwin in the development of molecular biology," says molecular biologist Kim Nasmyth, who directs the Institute of Molecular Pathology in Vienna and has taken the lead on the Austrian side. He envisions an ultramodern conference center and a rebuilt greenhouse at the rear of the monastery site. Such a center, he says, could "do for Brno what the new Guggenheim Museum has done for Bilbao" in Spain—drawing international attention and thousands of visitors.

That concept has won over a few luminaries. In a letter to Nasmyth in February, Havel said such a center would "promote a better understanding of Mendel and his extraordinary heritage." Watson—the U.S. Nobelist who co-discovered the structure of DNA, launched the Human Genome Project, and now directs the Cold Spring Harbor Laboratory in New York—visited the Mendelianum in 1998 and says he's "very enthusiastic" about the proposal.

So far, however, no one has come through with any cash. Recently, the European Molecular Biology Organization (EMBO) turned down Nasmyth's request for seed money. "EMBO would be delighted for scientific meetings to be organized in Brno," says director Frank Gannon, "but we don't plan to support the provision of a meeting center," a concept that he says is not part of EMBO's mission. One prominent European molecular biologist says that although he would like to see greater homage paid to the monk, he thinks Brno, a 2-hour drive from Vienna, is too remote for an international conference center. And Brno may find it hard to buck the trend of holding specialized symposia in resort areas such as Crete. Says one skeptic, "It's too bad that Mendel didn't do his work in a warm place with nice beaches."

Nasmyth concedes that his "romantic notion" of an architecturally stunning Mendel Center in Brno may take years to achieve. His group is searching for a prominent scientist, or a businessperson with scientific interests, to help set up a strategic plan. He concedes that they need to figure out how to attract top scientists to conferences in Brno, how to use the center during the weeks between conferences, and whether there's a need for another bioinformatics institute in Europe.

Meanwhile, the center's boosters are hoping to fan enthusiasm at several conferences this year to commemorate the 100th anniversary of the rediscovery of Mendel's work. The center idea came up in passing when many of the world's top Mendel scholars and some leading geneticists gathered in Paris last month for a 3-day colloquium on "The Rediscovery of Mendel's Laws." The concept also is being aired during the yearlong "Mendel Lectures" series sponsored by the Austrian Academy of Sciences as well as two meetings this spring and summer—the Mendelianum's forum on the history of genetics and a Mendel anniversary conference being organized by Palecek and others.

This year's festivities are honoring one of the greatest scientific insights of all time. Those trying to establish a Mendel Center hope that, finally, the attention will result in a more concrete tribute. "Something has always emerged to block such Mendel projects," says Mendel biographer Orel, who was fired from a Brno research institute in 1958 for daring to defend Mendelism. "If it isn't a world war, it's a money problem or a conflicting ideology." Still, he says, "I hope this latest plan succeeds."

–ROBERT KOENIG

MENTAL HEALTH

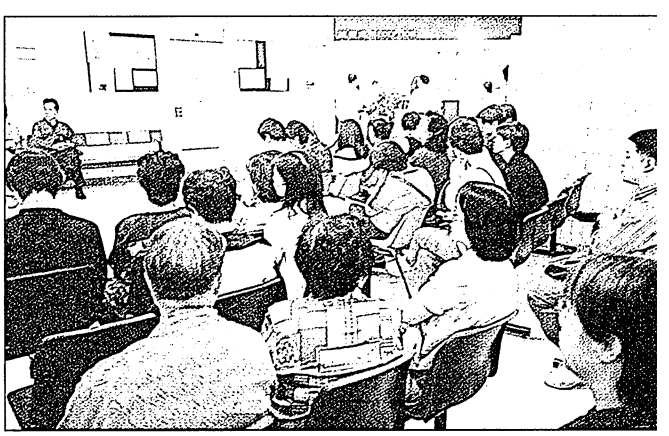
Global Survey Examines Impact of Depression

A new WHO study seeks to verify recent findings on the social and economic burden of depression worldwide using standardized instruments

Is depression "the cancer of the 21st century?" That provocative question was raised at this winter's World Economic Forum in Davos, Switzerland. Psychiatrist Raymond DePaulo of Johns Hopkins University School of Medicine explored the issue by noting that depression, although rarely fatal, is increasingly common, devastating to the patient, and—like cancer a generation ago—shrouded by stigma.

The fact that depression was a topic at this annual gathering of economic Pooh-Bahs is a striking sign of the emerging international visibility of mental and emotional disorders. The World Health Organization (WHO) also has stepped up its efforts to understand the problem, including the launch last month of a 25-nation study. The massive, in-depth survey of mental health conditions around the globe will focus on depression, which WHO expects to be the second leading cause of disability after heart disease by 2020. "Fifteen years ago international bodies would not have even included depression on the list of things to study," says DePaulo.

Recent U.S. findings have highlighted the debilitating impact of mental health conditions, depression in particular. Depression is a chronic condition, and it's associated with a range of other medical problems, from alcoholism to heart disease. Although it is often thought of as a byproduct of high-stress urban Western existence, it may in fact be even worse in poor countries. Malnutrition and infections make the brain more susceptible to mental disorders, notes Norman Sartorius, head of the European Association of Psychiatrists in Geneva, and



CREDIT: MING PAO DAILY NEWS

Seeking help. Residents wait for treatment at an outpatient psychiatric clinic in Hong Kong's Prince of Wales Hospital.